

RCVS Fellowship Day 2017

Fellows in Focus: Mission Rabies

Ian Battersby BVSc, FRCVS

Ian Battersby, RCVS Recognised Specialist in Small Animal Internal Medicine, described how he had become involved in Mission Rabies, a charity working to eliminate dog-mediated cases of rabies in people.

While the UK was lucky to be free of rabies, in other parts of the world, it was part of daily life. One child somewhere in the world died of rabies every nine minutes, he said. Once a person was infected, the disease was invariably fatal. However, it was also 100% preventable.

In 2012, he had been contacted by his friend, Luke Gamble, the founder of Mission Rabies. Mr Gamble had witnessed the impact of rabies in India and, while there were many fantastic projects working on rabies prevention, he had identified areas where there were no programmes tackling the disease. He was keen to change this.

Mr Battersby's colleagues at Davies Veterinary Specialists had encouraged his involvement with the Mission Rabies project. They had also raised funds in support and provided 50,000 doses of rabies vaccine.

Having begun work in India in September 2013, Mission Rabies is now active in three regions of India as well as in Sri Lanka, Tanzania and Malawi. At each of its sites, it works with a local non-governmental organisation and with its sister charity Worldwide Veterinary Service. Three key principles underlie its approach: mass vaccination of dogs, education of people and disease surveillance.

Mr Battersby explained that 98% of human rabies cases were contracted through dog bites. Epidemiological modelling had shown that the virus could be eliminated from a dog population if 70% of that population was vaccinated against rabies for three consecutive years.

Mission Rabies' approach to vaccination varied depending on the local community and its relationship with dogs. For example, he said, in Malawi, most dogs were owned, although they roamed freely, and people were happy to handle their dogs. As a result, if a vaccination drive was well publicised, 500

dogs could be waiting for vaccination at the start of a clinic. It meant that a team of three or four people could vaccinate more than 1,000 dogs in one day.

In contrast, in India, many dogs were strays and people were scared of them. Given the risk of contracting rabies from a bite by an infected dog, this was understandable. However, it meant that a different approach was required, with free-roaming dogs being netted for vaccination. Mr Battersby showed a short video highlighting the skills needed to net a dog. Once caught, a dog was given a brief health check (any with visible health problems were taken to a local charity for treatment), vaccinated and marked to show that it had been vaccinated.

Mission Rabies had also developed a smartphone app that allowed data to be gathered in real time about the dogs being vaccinated. Before a vaccination drive, the dog population in an area was surveyed. During the drive, data were collected through the app for every dog and fed live to a project manager, who could track progress. Once the 70% target had been reached, the vaccination team would move on to a new area. A second team would return to the area subsequently to check that the target had actually been met.

The app was a very powerful tool, said Mr Battersby, and was now being used by other agencies. For example, the US Government's Centers for Disease Control and Prevention was using it in Haiti, where it had helped to improve vaccination rates from 40% to 70%.

Education was also key to Mission Rabies' strategy, with the emphasis on teaching children. Children were taught about dog behaviour and how rabies affected dogs and people. They were also given first aid advice, such as how washing a wound with soap and water for 15 minutes could reduce the risk of infection. Simple advice was important, he said, as some people could live several days' walk from the nearest hospital. There was also the issue of treatment cost, which could be one month's wages.

Rabies surveillance was a multifactorial issue and not straightforward. It could be influenced by factors such as the availability of hospital facilities, cost and the cultural stigma associated with having a relative who died from the disease. Mr Battersby explained that research in Tanzania had found that, in some areas, the actual death rate from rabies was 100 times higher than official statistics suggested.

In the four years since Mission Rabies had begun its work, almost 750,000 dogs had been vaccinated across all its sites and 1.5 million children had received a Mission Rabies lesson. In September 2017, the World Health Organization had commended the charity's work, noting that in Goa, where Mission Rabies had started work in 2014, the number of human deaths from rabies had fallen from 17 in 2014 to 1 in 2016. To date in 2017, no-one had died from the disease.

There was real momentum behind Mission Rabies, Mr Battersby said. It was a true One Health initiative and the veterinary profession was right in the centre of it.